HEALTHCARE FIRE SAFETY

ROUNDTABLE REPORT

WASHINGTON, DC

Sponsored by the International Association of Fire Chiefs

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Introduction

"Among fire's victims, one large group stands out as a special and growing concern: the occupants of nursing homes and homes for the elderly. Annually 3,500 to 4,000 fires break out in these facilities. During the 20 years from 1951 to 1970, 496 residents of facilities for the aged died in multiple-death fires (those killing three or more). No one keeps a national record of single-fatality fires in nursing homes, but by conservative estimates the toll is 500 persons a year." (America Burning Report, 1973).

With well over two million older and disabled Americans living in nursing homes, assisted living facilities, and other unregulated housing, the need for adequate fire protection is a growing concern among those responsible for a population at higher risk for injury and death from fire and other hazards. Factors such as limited mobility and coordination and progressive degrees of mental impairment make residents of these homes and facilities especially prone to experiencing a tragic fire accident.

Life safety risks among this group are not limited to fire. Mitigating injuries and deaths from falls, infection, wandering, and other hazards are challenges that face responsible elder-care facility administrators. Sparse staffing, high turnover, and financial constraints compound these issues.

The Health Care Fire and Life Safety Roundtable brought participants from both the fire service and health care industries to address these concerns and identify ways to improve safety in nursing homes and assisted living facilities.

Background

The International Association of Fire Chiefs (IAFC) convened the Health Care Fire and Life Safety Roundtable in April 2004 in Reston, Virginia. Conferees included a representative cross section of healthcare and fire service industry leaders from throughout the United States. Participants included fire service professionals, healthcare administrators, and property managers.

The purpose of the conference was to identify emerging issues in health care facilities (nursing homes, assisted living centers, and retirement communities), initiate dialog, and develop recommendations to improve resident safety.

It is recognized that a recent increase in the number of assisted living and non-assisted "elder-living" facilities has precipitated a need for a model life safety plan to be prepared and distributed to the fire service and to the health care and building management communities. The plan, which the group recommended be developed at the direction of the IAFC, will be used as a training tool to teach building staff, health care providers, and residents how to respond to fires and other emergencies in their respective occupancies.

The forum was convened to draft a framework for such a plan and to develop findings presented at a workshop at IAFC's Fire-Rescue International (FRI) 2004 conference in New Orleans, Louisiana.

Process

This 50-member roundtable forum convened on April 22, 2004, and was comprised of subject matter experts from the fire service and health care industries. Individual participants were identified

and approved by the IAFC based upon professional credentials and work experience. Each confirmed attendee was provided with relevant background materials in advance of a professionally facilitated, two-day meeting in Reston, Virginia.

The conference consisted of an introductory general session which identified the types of care facilities within the scope of the forum's purpose. Due to the uniqueness of the disciplines represented, a brief familiarization of industry specific terminology and acronyms to be used during the discussion was presented. (This glossary can be found at the end of this report on page 12) General issues and concerns identified prior to the forum were reviewed, and case studies were considered and discussed.

Conference participants were divided by the moderator, Jack Snook of Emergency Services Consulting, Inc, into four sub-groups to target their efforts and focus deliberative discussion. Each sub-group consisted of participants selected for their interest and expertise relative to the topic assigned to the group. The number of participants in each sub-group was equalized to maximize time and human resource involvement.

Each sub-group identified issues within their area of assigned concentration. Once this effort was complete, the participants were brought back together to discuss each issue in general session, minimizing duplication and ensuring all major issues were covered within the sub-groups. Input was received and integrated into the forum documentation. The sub-groups then continued to work to address the identified issued by developing specific initiatives and strategies.

What follows is the result of debate and discussion among the professionals whose agencies, organizations, and personnel directly impact the emergency pre-planning and response efforts of their respective health care occupancies.

The forum focused on the following types of occupancies:

- Independent living
- Assisted living
- Residential care
- Board and care
- Skilled nursing
- Nursing
- Mental Retardation/Developmental Disabilities (MR/DD)

Conferees concurred upon the following focus topics:

- Education, training, and staffing
- Engineering and technology
- Legislation and Codes
- Emergency response

Group I – Education, Training, and Staffing

Issue I

Staff training and education on life safety issues are inadequate in many health care facilities.

Initiative

Identify the training, education, and processes necessary to improve life safety and injury prevention in health care facilities.

Strategies

The sub-group determined that it was necessary to define the target audiences to be educated and trained. The audiences were ascertained to include the following:

- Regulators
- Government managers
- Elected officials
- Facility managers
- Facility staff
- Residents and families
- Emergency responders
- AHJ's/Code officials

Discussion

In constructing training programs to be directed at the previously identified audiences, the group suggested that training needs assessment tools be developed to assure that the scope of life safety training is adequately defined according to the roles

and characteristics of the target audience. To further enhance the quality and practicality of such resources, it was recommended that area-specific appendices be developed for federal and state regulators, as well as Internet and academic resources.

The sub-group addressed barriers to learning, which included high employee turnover/mobility, English as a second language, inconsistency in the availability of technologies, and a lack of standardization in training and certifications. The participants agreed a strategy to develop training delivery systems that utilize communication tools proven to be effective in overcoming learning obstacles is needed. It was determined to be the responsibility of facility staff, regulators, fire service professionals, and other government entities to develop, approve, and provide life safety training and educational resources for the benefit of the healthcare industry.

Issue II

Inconsistent interpretation of regulations makes it difficult to enforce and apply them and impedes efforts to deliver compliance education.

Initiative

Establish a coalition between government regulators, healthcare providers, and code officials to create interdependent communications and resource allocation on issues pertaining to resident safety.

Strategies

The focus group assessed that coalition members must strive to identify areas of discrepancy and contradiction in the relevant codes, to reconcile them, and to arrive at a consistent interpretation to be shared with the industry. The strategy included a directive for the coalition to move the unified interpretation forward through the development of education and training resources and materials designed to inform and support the implementation of the deliverables across the health care industry.

Education and Training Matrix

The following matrix was developed by the participants to illustrate what kinds of educational and complience materials should be distributed to the industry and which audiences would benefit from them.

Education and Training Matrix			
	Codes/ Regs	Policies	Procedures
Residents & Families			X
District Care Staff		X	X
Facility Mgrs/Fire Mgrs		X	X
Maint. Staff	X	X	X
(AHJ's)	X	X	X
First Responders			X

Group II – Engineering and Technology

Issue I

Elopement is a serious threat to residents of healthcare facilities. Protections in place to prevent elopement may conflict with efforts to facilitate emergency exiting.

Initiative:

Develop a technological design to protect residents from elopement, while also providing an adequate emergency egress.

Note: The fire service, previously unaware of the term elopement, learned that the term is used to describe the serious risk that many Alzheimer's and other patients have of wandering away from the safe confines of a care facility.

Strategies

The group identified several safe-locking systems that would achieve the goal of emergency egress without providing an elopement hazard. The characteristics of the proposed locking devices are listed as follows:

- Unlock upon power loss
- With auto unlock, cannot re-lock
- Remote release

- Electronic lock as sole lock on door
- Unlock by activation of fire/smoke alarm

Discussion

A stipulation that staff must be present when exits are locked was emphasized by the group.

It was recommended that the requirement for operable windows be re-evaluated and eliminated in cases where it is warranted for the protection of residents with a disposition to elope.

In cases where it is advisable to evacuate patients at high risk for elopement, it was suggested that outside secured areas be designated. When these locked areas are used, staff must be present with a key to permit emergency egress if necessary.

The participants suggested that meetings be convened on a regional basis to develop well-defined solutions to address these and other issues that meet the needs of both stakeholder groups.

Issue II

It is often difficult or impossible to evacuate a facility with fragile or mentally impaired patients/residents in a timely manner.

Initiative

Develop design and technology to improve life safety in health care facilities.

Discussion

The entire forum deliberated the effect that transitions in the level of care provided for individual patients has on pre-incident/fire-planning efforts. Often, it was noted that a resident or patient may be admited in relatively good health and mental acuity, which may deteriorate over time, changing significantly the operational response tactics required to achieve a successful outcome. For instance, in some cases, it may be advisable to shelter in place, rather than attempt an evacuation, or in cases of mobility limitations, for elevators to be engineered to allow residents to use them for egress in the event of a fire.

Discussion

Participants in the focus group agreed that technology and design improvements to elevators need to be implemented so that elevators can be permitted as a safe means of egress.

Strategies

The group's strategy included the encouragement of the engineering community to make improvements to existing structural components to facilitate egress. To complete the process, the group suggested that new technology gains be incorporated into existing codes and standards so they can augment life safety efforts.

Issue III

Cost of suppression systems is prohibitive for many facilities who do not have funding resources available to retrofit their facility.

Initiative

Consensus was achieved that the industry should evaluate the need for sprinklers and/or detection based on ambulation of residents and the size of the facility in existing facilities.

Strategies

Funding was identified as the primary obstacle for achieving retro-fitted, sprinklered occupancies. It was recommended that funding incentives or grants be implemented to encourage sprinkler installations. It was further suggested that a method be created that would allow the correlation between existing mobility assessment processes and an appropriate level of detection and/or suppression.

Other funding sources and incentives to retrofit existing facilities with fire protection systems with appropriate phasing were considered by the group. They are as follows:

- Identify and pursue additional grant programs similar to the fire prevention grants offered by the Assistance to Firefighters Grant (AFG) Program
- Push for additional tax incentives (H.R.1824)
- Pursue Center for Medicare/Medicaid

Services (CMS) pass through
- Utilize accelerated depreciation as an incentive
- Develop low interest loan programs
- Get Medicare fee schedule support with partners, including the International Association of Firefighters (IAFF), National Fire Protection Association (NFPA), and the International Code Council (ICC), among others

Issue IV

Advancements in engineering and development of life safety features and products lag behind available technology.

Initiative

Reconcile new technologies with security and life codes and standards to encourage development and installation of features and products that take advantage of new technology advancements.

Strategies

Useful technologies are becoming available to health care facilities. Many deserve recognition for the positive impact they are having on life safety efforts. For example, alcohol based disinfectants are a new tool to combat the threat of infection in health care facilities. It is known that many more patients die each year due to infections contracted while in a care facility than die as a result of a fire incident. The future is brighter because of these disinfectants. The forum agreed that the cleaners should be allowed, but storage not be permitted near an egress due to flammability concerns.

Group III - Legislation and Codes

Issue I

Regulatory agencies enforce multiple, conflicting codes, making compliance difficult.

Initiative

Eliminate inconsistencies of code enforcement for each level of care and at all levels of government by having a single, comprehensive code set to include building, fire, and mechanical codes.

Strategies

Consensus of the forum is that adoption of a single, comprehensive code set is an important focus. It was further agreed that efforts must be mobilized to pursue legislation in order to coordinate statutes, administrative law, and codes to achieve uniformity. Industry participation in the rule-making process was emphasized as pivotal to achieve success for this initiative.

Issue II

Lack of knowledge and inconsistent application of codes, regulations, and laws impedes the industry's ability to be in compliance with current standards.

Initiative

Improve consistency in the application of codes, regulations, and laws.

Strategies

Develop training and certification programs for both long-term care facility personnel and regulators and implement standardized certification programs to address the current variations in training requirements.

Group IV – Emergency Response

Issue I

Long term facilities often lack an approved fire and emergency pre-plan.

Initiative

Develop a comprehensive program for fire departments to perform pre-incident planning with each health care/long-term care (LTC) facility in their jurisdictions in accordance with NFPA 1620.

Strategies

The following recommendations were made for local fire jurisdictions by the group:

- Inventory all health care/LTC facilities within jurisdiction. It was noted by the focus group that many smaller, particularly residential care facilities, may be difficult to

locate as they are not heavily regulated or documented
- Prioritize and schedule site visits for the purpose of pre-planning
- Develop pre-incident plans in partnership with the facilities managers and other stakeholders
- Review and rehearse the plans and roles of each member on an annual basis and in accordance with regulatory requirements

To overcome the obstacle of lack of awareness among health care providers about pre-incident planning and the related recommended practices outlined in NFPA 1620, the focus group recommended that educational campaigns be developed and distributed through industry trade associations, publications, and journals.

Issue II

The health care industry has not been introduced to the Incident Command System (ICS)/Incident Management System (IMS) on a national scale and does not know how to utilize the system in collaboration with emergency services professionals in the event of an incident.

Initiative

Develop or adopt a comprehensive national program that requires first responders, including facility staff, to become familiar with and implement the National Incident Management System (NIMS) scene management system in health care/long-term (LTC) facilities.

Strategies

In order to achieve a program tailored to the requirements of health care facilities, it was envisioned that an incident command system should be developed in collaboration with health care/LTC facilities staff, fire and emergency response personnel, and other stakeholders in a process similar to the successful program developed for primary education occupancies, such as the ICS Goes to School program was developed in response to the SAVE (Safe Schools Against Violence in Education) legislation requirement that schools in New York State use the ICS for incidents on school property.

To facilitate this objective, it was recommended that the National Fire Academy (NFA) be used as an educational resource and that incentives be designed to encourage broad implementation.

Discussion

The group discussed the need for greater understanding and coordination of activities before and after emergency services personnel arrive. Particularly important are the role and responsibilities of on-site staff as they prepare for the arrival of emergency responders.

Issue III

Policies and procedures to facilitate emergency evacuations and/or Defend in Place practices have not been developed and distributed for the health care industry to follow.

Initiative

Develop a national plan to address evacuations and the Defend in Place concept for health care/LTC facilities.

Strategies

To support this understanding, the forum determined that the industry should ensure that appropriate fire protection features such as compartmentation, a passive system of barriers that slows down the progress of a fire and smoke, and other fire protection systems are in place to reinforce the defend in place concept where it may be employed effectively.

Discussion

It became evident that defending in place and internal evacuation may be the best option for many care facilities, given the proportion of patients they serve with limited mobility and elopement risk factors.

The consensus of the participants was that a national plan should be created to address the issue in depth and to familiarize and educate the health care industry about Defend in Place concepts. It was addressed that support of internal evacuation procedures should be further strengthened as a viable, working response option through the education of

facility staff, residents, families, and first responders.

Issue IV

Unannounced fire drills are unsafe and ineffective when used in healthcare setting. They can cause injuries to fragile participants and do not have value as a training tool.

Initiative

A national plan should be implemented to transition from "Unannounced to Announced Fire Drills" for health care/LTC facilities.

Strategies

Educate providers, fire responders, CMS, state survey agencies, and state policy makers of the benefits of announced fire drills versus unannounced fire drills. The following reasons were cited:

- Reduce injuries and mental anxiety among residents.
- Enhance the importance and benefits of fire safety and evacuations among staff, residents, and families.
- Potentially reduce injuries and ensuing liabilities.
- Facilitate cooperative pre-emergency efforts with local emergency response personnel.

This issue was identified as one of high importance by the participants. It was suggested that the industries cooperate to seek policy and law changes to require announced fire drills in lieu of unannounced fire drills.

A plan to ask local health care/LTC facilities to develop a reporting mechanism to notify local fire departments when announced fire drills are to be conducted was strongly supported as a way to facilitate and encourage cooperative pre-event exercises.

Conclusion

The rights of adult residents in a care facility to determine their level of care, compliance with safety and other policies and procedures, and their freedom of movement were addressed by the forum. Those who work closely with the elderly and disabled articulated that these individuals have a stake in their own care and well-being. The administrations of the concerned occupancies noted that they are obligated to take into account consumer demands, among other factors. The issues of dignity and patient advocacy were strongly considered throughout the discussion process.

At the conclusion of the roundtable forum, fire service participants expressed that they had found a new appreciation for the complexity of health care issues and learned that risks such as medication errors, falls, and elopement pose significant concern to health care professionals. Solutions to reduce risk of fire injury and death must be balanced with measures available to lower other life safety risks, such as infection.

Participants developed a new understanding of the financial obstacles facing many care facilities that make implementing improvements challenging. Health care participants expressed their concern for their residents and patients and a sincere desire to make their facilities safer. Retrofitting facilities with sprinklers was approved by all as an ideal option. However, it is often not feasible to achieve this objective because of limited resources given the small risk of injury or death from fire, especially when compared to other more urgent and serious life-safety concerns. Funding sources should be researched to assist facilities in making capital improvements that impact life safety.

A fresh coalition was established during the two-day conference. The participants agreed that the meeting opened communication between the fire and health care industries and improved the understanding of the roles and services each strives to provide. Those in attendance adamantly agreed that the health care and fire industry should formally work together to promote educational efforts, form pre-planning recommendations, and promote legislative and other regulatory objectives.

As a result of the alliances created by the forum, several fire service leaders have been invited to speak at key health care conferences during the next year.

It was suggested that the fire service involve health care officials in fire service presentations as well.

Since the meeting in April, reports have been received that several local meetings have been held as a result of the relationships established at this forum to promote the initiatives and begin to implement the strategies delivered by the group.

Next Steps

The participants agreed that the dialog between the fire service and health care industries initiated a new and valued relationship that should be promoted and encouraged through future collaboration and ongoing discussion..

The problems discussed were significant, the initiatives and strategies were well considered and practical. Numerous action items are contained in this report that, if implemented, will provide a marked improvement in life safety in health care and assisted living facilities. The groups implore the IAFC to devote sufficient staff time and resources to ensure follow through on this report's recommendations.

Implementation

The following initatives should be implemented:

Identify the training, education, and processes necessary to improve life safety and injury prevention in health care facilities.

Fire Officers and Health Care Administrators Convened in Washington D.C. to Discuss Life Safety Issues

Establish a coalition between government regulators, healthcare providers, and code officials to create interdependent communications and resource allocation on issues pertaining to resident safety.

Develop a technological design to protect residents from elopement, while also providing an adequate emergency egress.

Develop design and technology to improve life safety in health care facilities.

Consensus was achieved that the industry should evaluate the need for sprinklers and/or detection based on ambulation of residents and the size of the facility in existing facilities.

Reconcile new technologies with security and life codes and standards to encourage development and installation of features and products that take advantage of new technology advancements.

Eliminate inconsistencies of code enforcement for each level of care and at all levels of government by having a single, comprehensive code set to include building, fire, and mechanical codes.

Improve consistency in the application of codes, regulations, and laws.

Develop a comprehensive program for fire departments to perform pre-incident planning with each health care/long-term care (LTC) facility in their jurisdictions in accordance with NFPA 1620.

Develop or adopt a comprehensive national program that requires first responders, including facility staff, to become familiar with and implement the National Incident Management System (NIMS) scene management system in health care/long-term (LTC) facilities.

Develop a national plan to address evacuations and the Defend in Place concept for health care/LTC facilities.

A national plan should be implemented to transition from "Unannounced to Announced Fire Drills" for health care/LTC facilities.

TERMS USED IN ASSISTED LIVING

Activities of Daily Living (ADL) – Physical functions that a person performs every day that typically include dressing, eating, bathing, toileting, and transferring. Disability is often measured by limitations in activities of daily living.

Acuity-Based Staffing – A model in which the number of staff is determined by the heath care needs and functional dependencies (acuity) of the residents, as well as the number of residents with significant needs requiring hands-on care.

Continuing Care Retirement Community (CCRC) – A community that provides more than one living and services option on the same campus. Typically these levels include independent living apartments, assisted living, and skilled nursing.

Dementia – A decline in cognitive functioning measured by impairment of memory, orientation, judgment, learning, and calculation. It is often accompanied by emotional and behavioral manifestations. Dementia is a group of symptoms caused by some underlying disease state such as Alzheimer's disease, Parkinson's disease, or stroke.

Direct Service Staff – All staff, paraprofessionals (e.g., personal care assistants, medication assistive personnel or professionals (e.g., nurses, or other heath care professionals), who provide hands-on or direct services to residents and have most direct contact with families at any time. Also referred to as direct care staff.

Elopement – Inappropriate wandering from and ALR by a resident, usually by a resident with cognitive impairments to his judgment.

Home and Community –Based Waivers – Funding for home and community-based services provided under the Medicaid program. States can receive waivers from certain Medicaid requirements in order to provide targeted assistance to different populations in different settings. Forty-one states now provide some Medicaid funding to assist living, most frequently through home and community-based waivers.

Indirect Service Staff – Staff who assist in providing services within the assisted living residence or to residents but whose primary responsibilities do not include resident contact. Examples include maintenance, housekeepers, and food service professionals.

Instrumental Activities of Daily Living (IADL's) – Functions that involve managing one's affairs and performing tasks of everyday living, such as preparing meals, taking medications, walking outside, using a telephone, managing money, shopping, and housekeeping. The amount of help a person needs in performing these tasks is frequently used as one measure of disability.

Shared Responsibility – A shared responsibility agreement is a written agreement between the resident and the assisted living residence that memorializes the parties' discussions and agreements regarding preferences and how they will be accommodated in the community. Shared responsibility agreements, sometimes known as negotiated risk agreements, are generally used when the resident's preferences require a deviance from accepted standards or rules where the risk of an adverse outcome is substantial.

Special Care Units – A section within an assisted living residence or nursing home with a specified number of units devoted to residents with specific needs. The most common type of special care unit is for residents with dementia.

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The participants agreed that the dialog between the fire service and health care industries initiated a new and valued relationship that should be promoted and encouraged through future collaboration and ongoing discussion.

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